PIONEER®
The Art of Entertainment

Service Manual

ORDER NO.
ARP2134

FM/AM DIGITAL SYNTHESIZER TUNER

F-Z94L
F-Z94

MODEL F-Z94L, F-Z94, F-Z570L and F-Z570 HAVE FOLLOWING VERSIONS :

Type	Applicable model				Power requirement	Destination
	F-Z94L	F-Z94	F-Z570L	F-Z570		
ZEB	○	×	○	×	(DC power supply)	European continent and United Kingdom
ZEWZ	×	○	×	○	(DC power supply)	Germany
Z	×	○	×	○	(DC power supply)	General market
ZEWX1B	○	×	○	×	(DC power supply)	European continent
ZIX1B	×	○	×	○	(DC power supply)	Italy

- **This manual is applicable to the F-Z94L/ZEB and F-Z94/ZEWZ types.**
- **As to the other types, refer to applicable service manuals.**
- **F-Z94L and F-Z570L cover MW/LW bands while F-Z94 and F-Z570 cover MW.**
- **These products are components of systems. As to the system composition, refer to the system manuals.**
- **Each of these products does not function properly when independent ; to avoid malfunctions, be sure to connect it to the prescribed system components, otherwise damage may result.**
- **Ce manuel pour le sevice comprend les explications de réglage on français.**
- **Este manual de servicio trata del método ajuste escrito en español.**

PIONEER ELECTRONIC CORPORATION 4-1, Meguro 1-Chome, Meguro-ku, Tokyo 153, Japan
PIONEER ELECTRONICS SERVICE INC. P.O. Box 1760, Long Beach, California 90801 U.S.A.
PIONEER ELECTRONICS OF CANADA, INC. 505 Cochrane Drive, Markham, Ontario L3R 8E3 Canada
PIONEER ELECTRONIC [EUROPE] N.V. Keetberglaan 1, 2740 Beveren, Belgium
PIONEER ELECTRONICS AUSTRALIA PTY. LTD. 178-184 Boundary Road, Braeside, Victoria 3195, Australia TEL: [03] 580-9911
© PIONEER ELECTRONIC CORPORATION 1990
FX DEC. 1990 Printed in Jap

F-Z94L

CONTENTS

1. SPECIFICATIONS 2
2. EXPLODED VIEWS, PACKING AND PARTS LIST 3
3. SCHEMATIC DIAGRAM 6
4. P.C. BOARD CONNECTION DIAGRAMS 10
5. P.C.B'S PARTS LIST 13
6. ADJUSTMENTS 15
6. RÉGLAGE 16
6. AJUSTE 17
7. FOR F-Z94/ZEWZ TYPE 20
8. PANEL FACILITIES 22

1. SPECIFICATIONS

FM Tuner Section

Frequency range ..... 87.5 MHz to 108 MHz
Usable Sensitivity ..... Mono: 12.8 dBf, IHF (1.2 μV/75 Ω)
Sensitivity (DIN) ..... Mono S/N 26 dB: 1 μV/75 Ω
Stereo S/N 46 dB: 35 μV/75 Ω
Signal-to-Noise Ratio (IHF, 85 dBf Input) ..... Mono: 77 dB
Signal-to-Noise Ratio (DIN) ..... Mono: 66 dB
Stereo: 60 dB
Distortion ..... Stereo: 0.5 % (1kHz)
Antenna Input ..... 75 Ω unbalanced

MW (AM) Tuner Section

Frequency Range ..... 531 kHz to 1,602 kHz
Sensitivity (IHF, Loop antenna) ..... 350 μV/m
Antenna ..... Loop Antenna

LW Tuner Section

Frequency range ..... 153 kHz to 281 kHz
Sensitivity (IHF, Loop antenna) ..... 1500 μV/m
Antenna ..... Loop Antenna

Miscellaneous

Dimensions ..... 360 (W) x 68 (H) x 316 (D) mm
Weight (without package) ..... 2.2 kg

Furnished Parts

FM Antenna 1
AM Loop Antenna 1

- *Specifications and design subject to possible modification without notice due to improvement.*

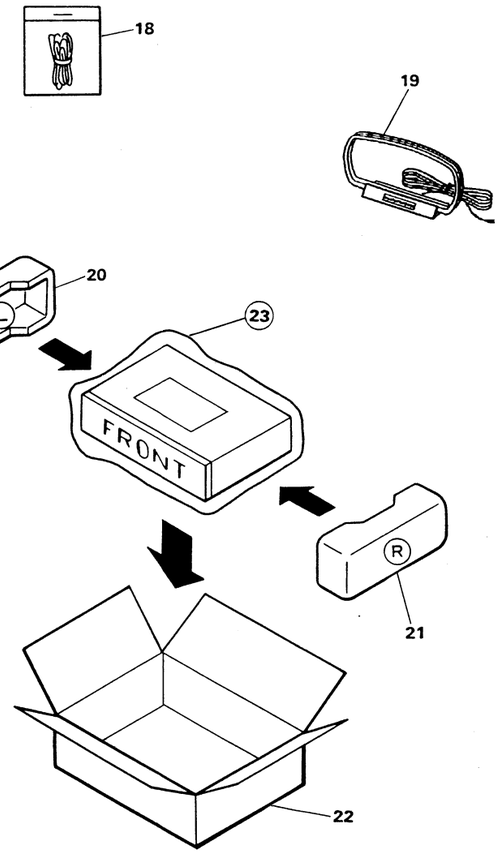
2. EXPLODED VIEWS, PACKING AND PARTS LIST

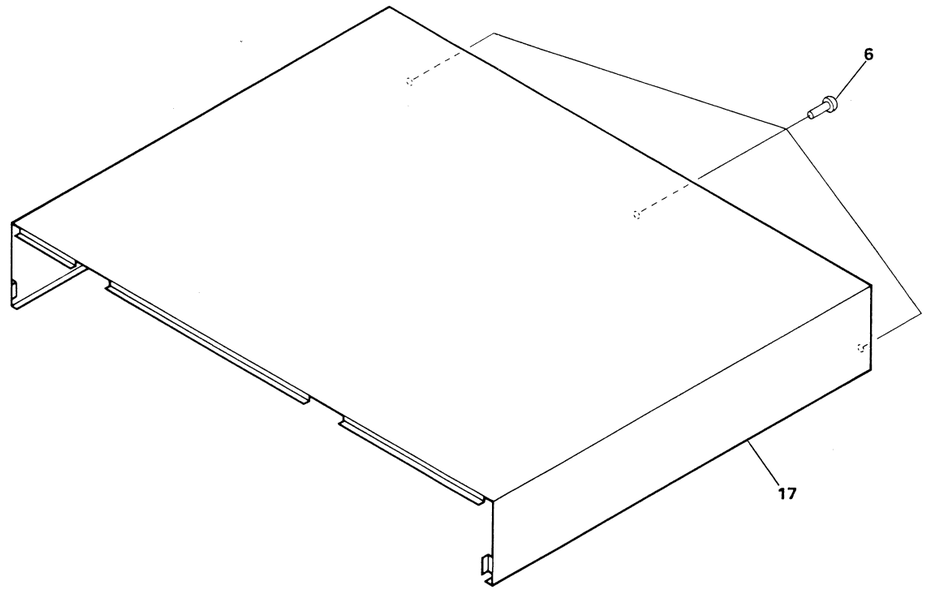
NOTES :

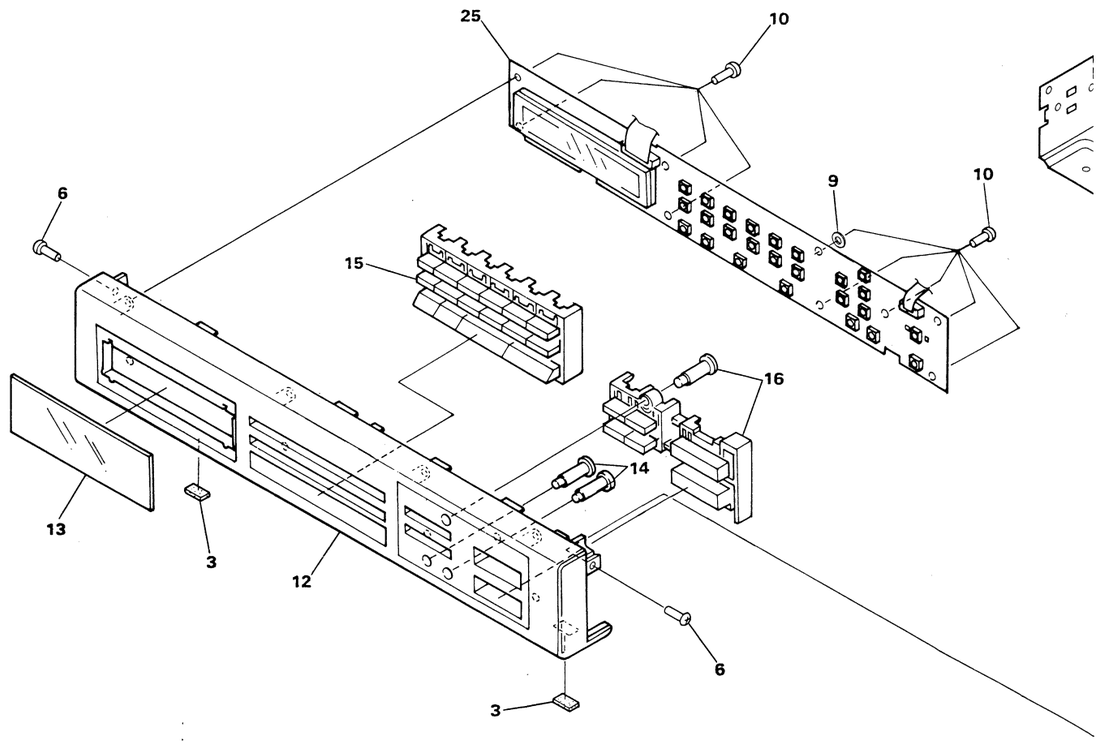
- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

PARTS LIST OF EXTERIOR AND PACKING

Mark	No. & Description	Part No.
	1. CORD WITH PLUG	ADE1102
	2. CHASSIS	
	3. RUBBER SHEET	AEB1111
	4. WASHER	AED1112
	5. PCB MOULD	
	6. SCREW	ABA-298
	7. SCREW 3×18	ABA1018
	8. SCREW 3×18	ABA1100
	9. WASHER	ABE-053
	10. SCREW	BPZ26P080FMC
	11. LEG ASSEMBLY	AEC1203
	12. FRONT PANEL	AMB1739
	13. DISPLAY PLATE	AAK2082
	14. GOLDEN BUTTON	AAD1682
	15. STATION BUTTON	AAD1892
	16. WAKE UP BUTTON	AAD1893
	17. BONNET	ANE1285
	18. FM ANTENNA	ADH1008
	19. LOOP ANTENNA ASSEMBLY	ATB1006
	20. SIDE PAD(L)	AHA1312
	21. SIDE PAD(R)	AHA1313
	22. PACKING CASE	AHD1995
	23. PACKING SHEET	
	24. MAIN ASSEMBLY	AWZ3196
	25. DISPLAY ASSEMBLY	AWZ3199
	26. EARTH PLATE(F-Z94/ZEWZ only)	

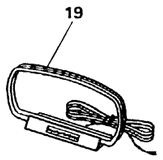




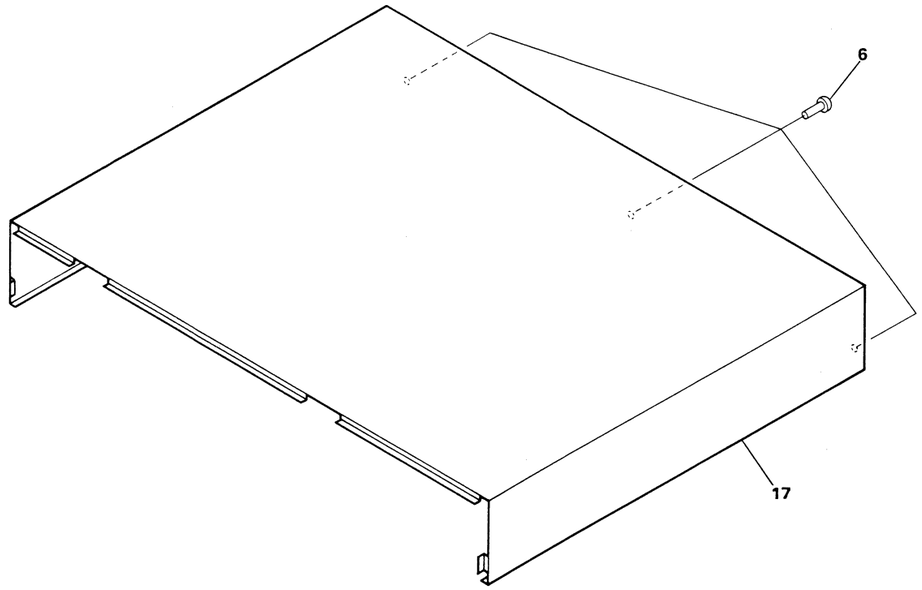


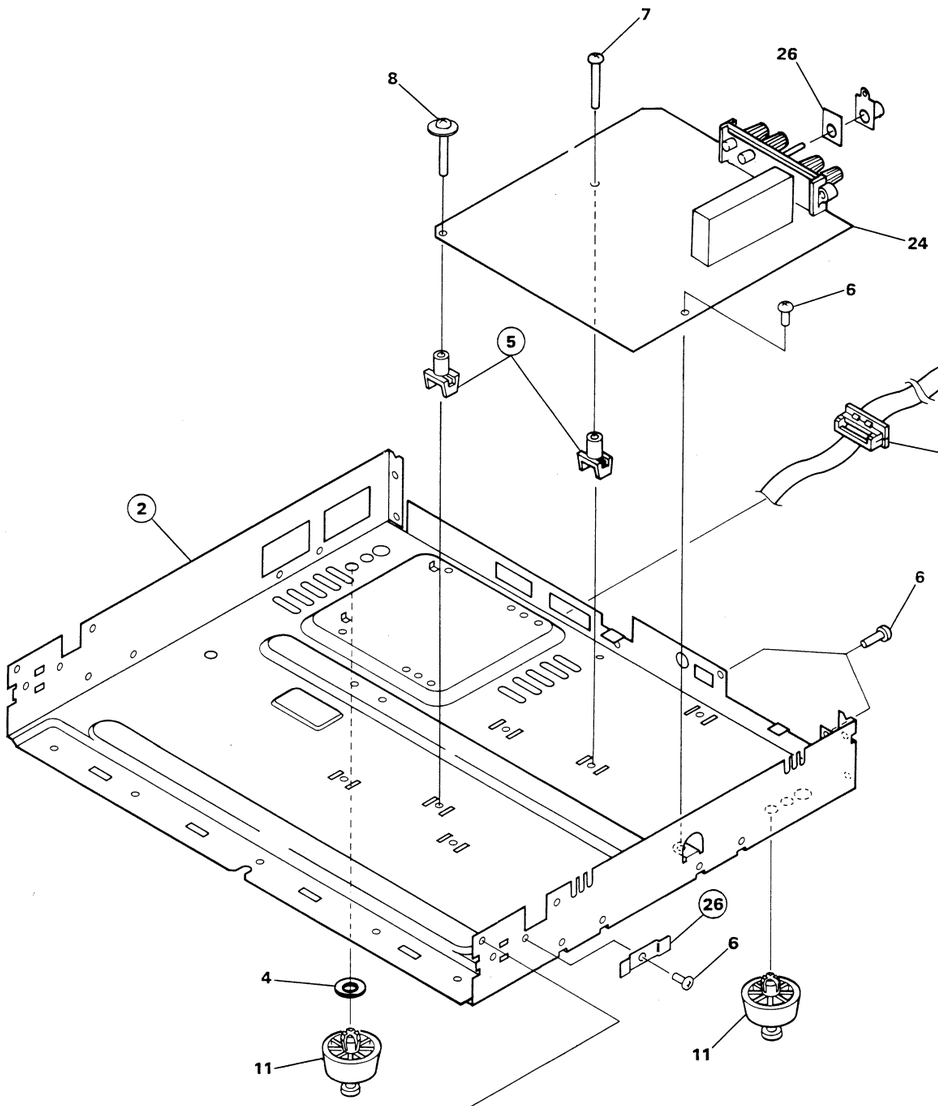
r they may be

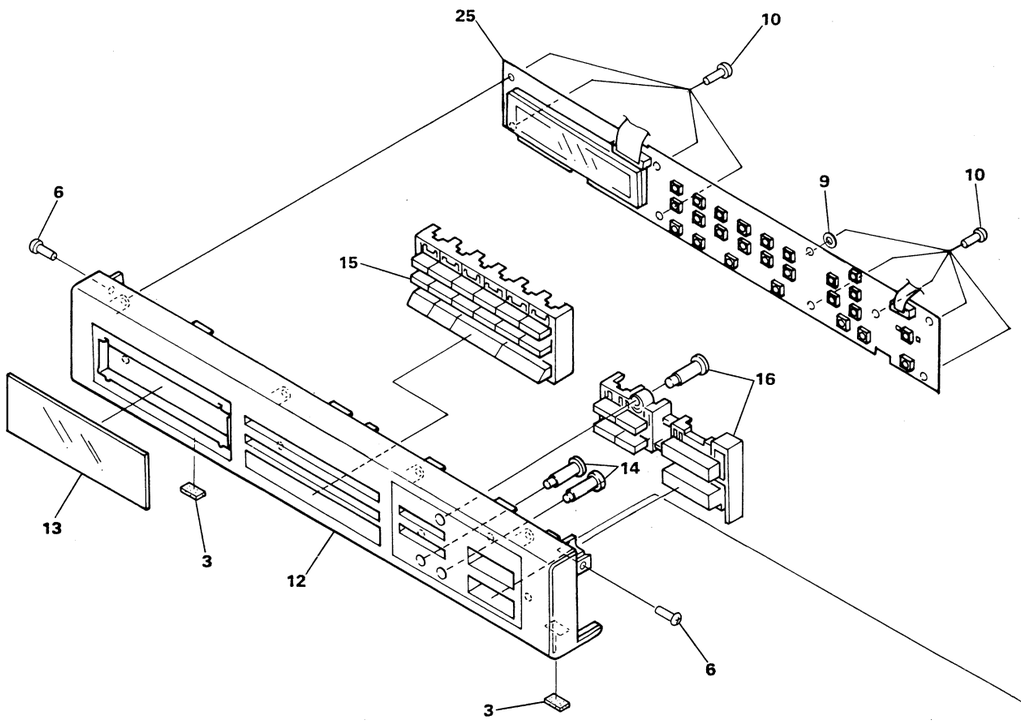
of the part.



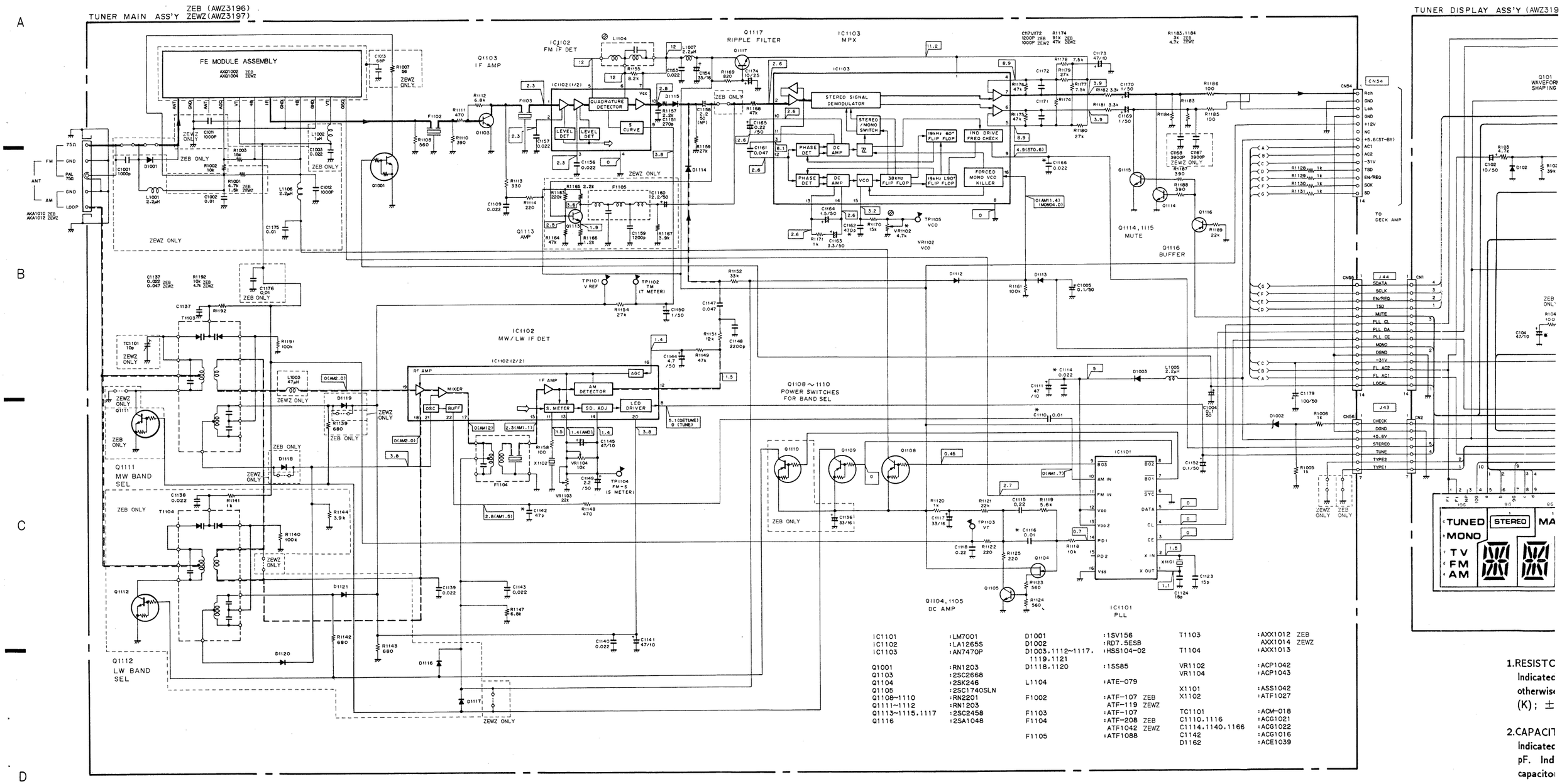
22







3. SCHEMATIC DIAGRAM



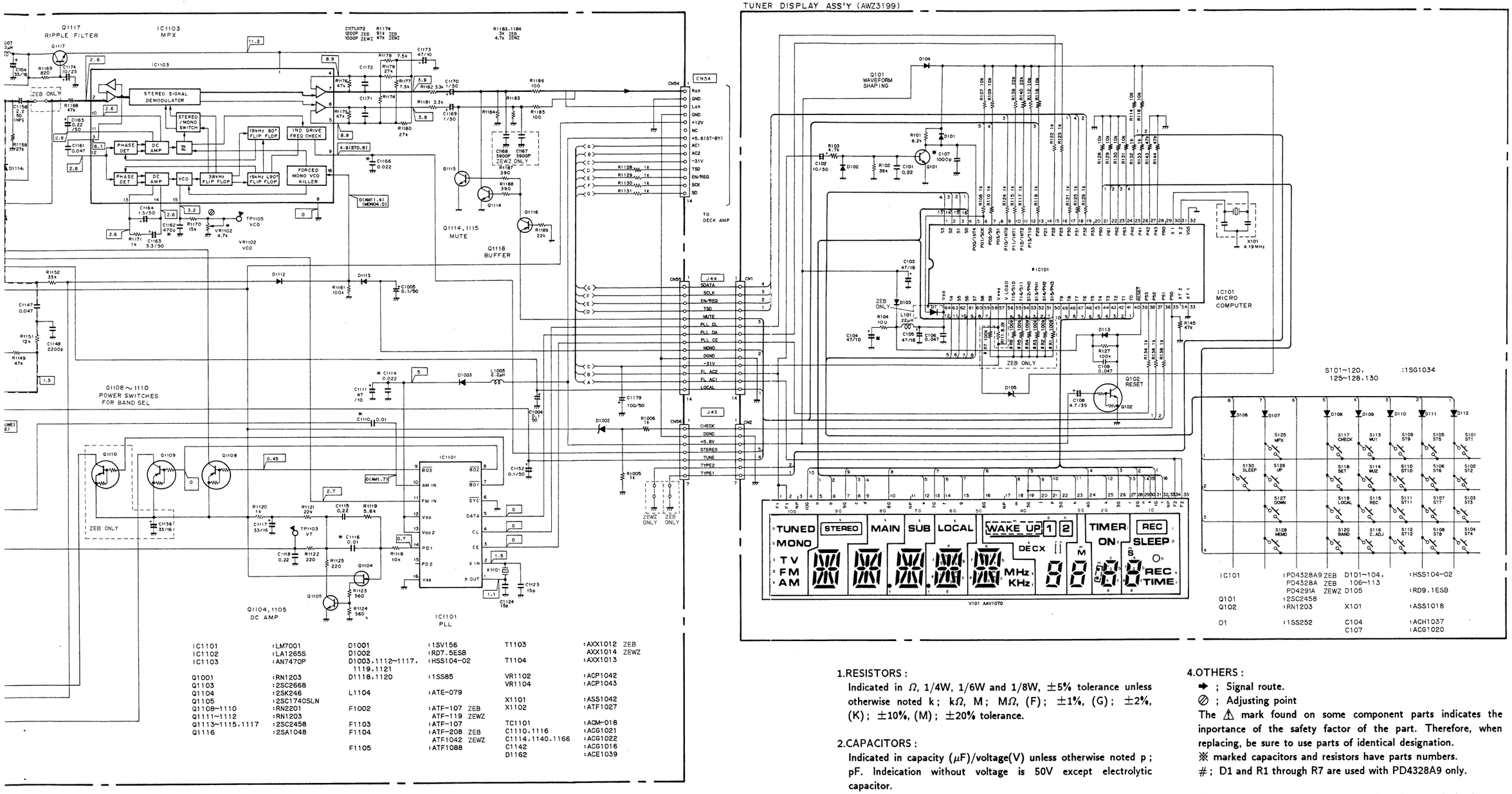
IC1101	:LM7001	D1001	:1SV156	T1103	:AXX1012 ZEB
IC1102	:LA1265S	D1002	:RD7.5ESB		AXX1014 ZEWZ
IC1103	:AN7470P	D1003,1112~1117, 1119,1121	:HSS104-02	T1104	:AXX1013
Q1001	:RN1203	D1118,1120	:1SS85	VR1102	:ACP1042
Q1103	:2SC2668			VR1104	:ACP1043
Q1104	:2SK246	L1104	:ATE-079	X1101	:ASS1042
Q1105	:2SC1740SLN	F1002	:ATF-107 ZEB	X1102	:ATF1027
Q1108~1110	:RN2201		ATF-119 ZEWZ		
Q1111~1112	:RN1203	F1103	:ATF-107	TC1101	:ACM-018
Q1113~1115,1117	:2SC2458	F1104	:ATF-208 ZEB	C1110,1116	:ACG1021
Q1116	:2SA1048		ATF1042 ZEWZ	C1114,1140,1166	:ACG1022
		F1105	:ATF1088	C1142	:ACG1016
				D1162	:ACE1039

1.RESISTC
Indicatec
otherwis
(K); ±

2.CAPACIT
Indicatec
pF. Ind
capacito

3.VOLTAG

⇦mA ;
mV



IC1101	:LM7001	D1001	:1SV156	T1103	:AXX1012 ZEB
IC1102	:LA1265S	D1002	:RD7.5ESB		AXX1014 ZEWZ
IC1103	:AN7470P	D1003,1112~1117, 1119,1121	:HSS104-02	T1104	:AXX1013
Q1001	:RN1203	D1118,1120	:1SS85	VR1102	:ACP1042
Q1103	:2SC2668			VR1104	:ACP1043
Q1104	:2SK246	L1104	:ATE-079	X1101	:ASS1042
Q1105	:2SC1740SLN			X1102	:ATF1027
Q1108~1110	:RN2201	F1002	:ATF-107 ZEB		
Q1111~1112	:RN1203		ATF-119 ZEWZ	TC1101	:ACM-018
Q1113~1115,1117	:2SC2458	F1103	:ATF-107	C1110,1116	:ACG1021
Q1116	:2SA1048	F1104	:ATF-208 ZEB	C1114,1140,1166	:ACG1022
			ATF1042 ZEWZ	C1142	:ACG1016
		F1105	:ATF1088	D1162	:ACE1039

1.RESISTORS :
Indicated in Ω, 1/4W, 1/6W and 1/8W, ±5% tolerance unless otherwise noted k ; kΩ, M ; MΩ, (F) ; ±1%, (G) ; ±2%, (K) ; ±10%, (M) ; ±20% tolerance.

2.CAPACITORS :
Indicated in capacity (μF)/voltage(V) unless otherwise noted p ; pF. Indeication without voltage is 50V except electrolytic capacitor.

3.VOLTAGE, CURRENT :
[ ] ; DC voltage (V) at no input signal.
Value in ( ) is DC voltage at rated power.
⇦mA ; DC current at no input signal.
[mV] ; Signal voltage at FM 400Hz±75Hz DEV.

4.OTHERS :
➡ ; Signal route.
⊘ ; Adjusting point
The ⚠ mark found on some component parts indicates the inportance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
※ marked capacitors and resistors have parts numbers.
; D1 and R1 through R7 are used with PD4328A9 only.

This is the basic schematic diagram, but the actual circuit may vary due to improvements in design.

4. P.C.BOARD CONNECTION DIAGRAMS

NOTE

1. This P.C.B connection diagram is viewed from the parts mounted side.
2. The parts which have been mounted on the board can be replaced with those shown with the corresponding wirng symbols listed in the following Table.

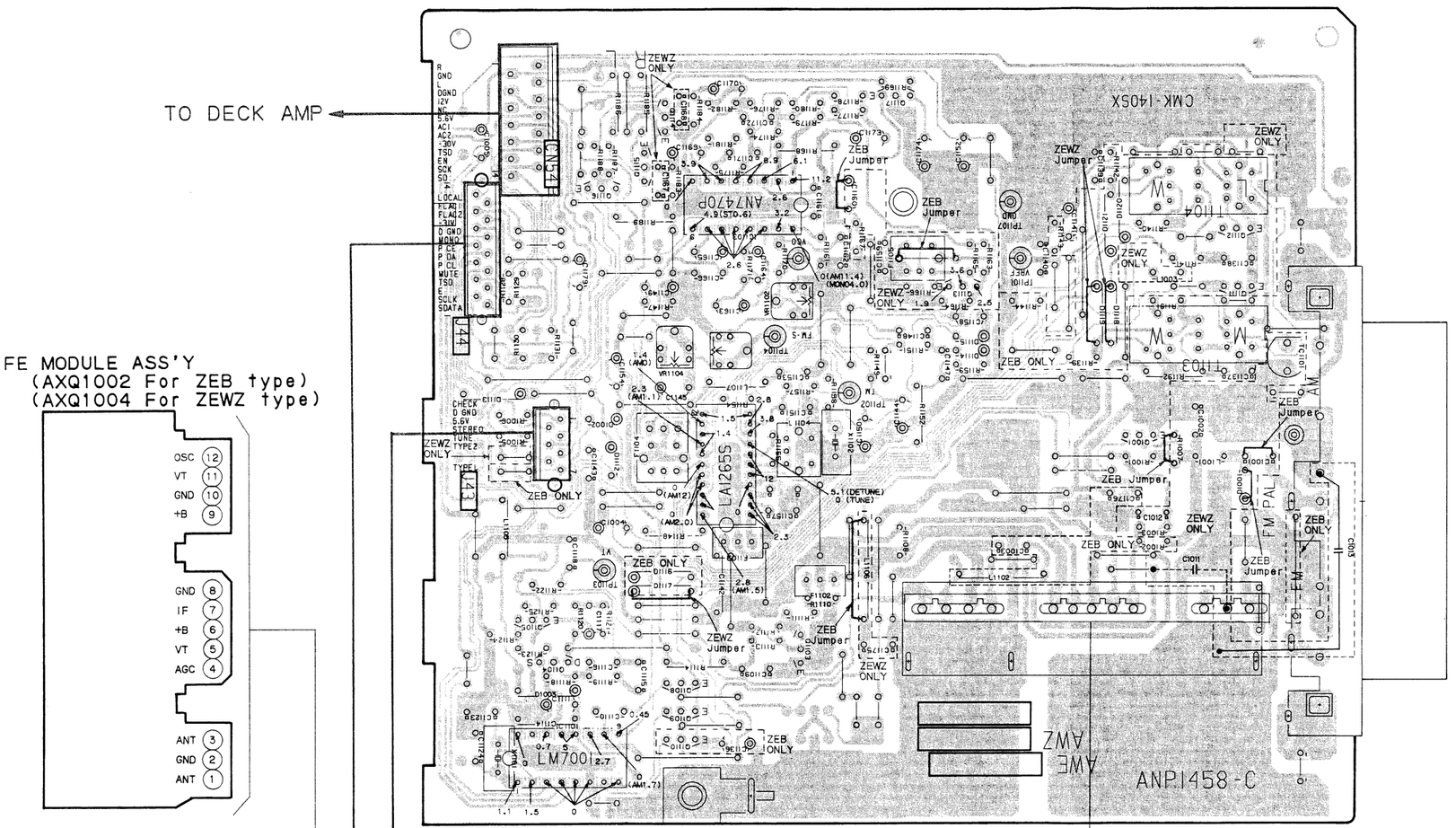
P.C.B. pattern diagram indication	Corresponding part symbol	Part Name
Q504 (E C B)	E C B or E C B	Transistor
Q215	or	Radiator type transistor
D203	D203	Diode
R237	R237	Resistor
C513	+	Capacitor (Polarity)
C518		Capacitor (Non-polarity)

Others

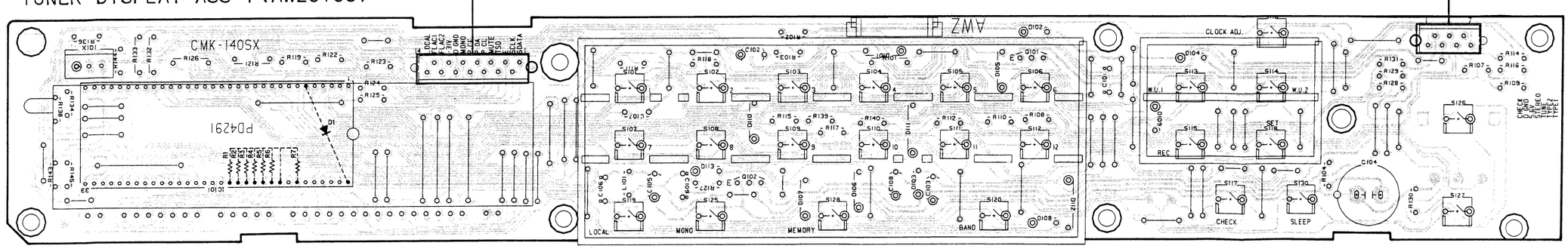
P.C.B. pattern diagram indication	Part Name
IC	IC
S	Switch
RY	Relay
L	Coil
F	Filter
VR	Variable resistor or Semi-fixed resistor

3. The capacitor terminal marked with ◎ (double circles) shows negative terminal.
4. The diode terminal marked with ◎ (double circles) shows cathode side.
5. The transistor terminal to which E is affixed shows the emitter.

TUNER MAIN ASS'Y (AWZ3196 For ZEB type) (AWZ3197 For ZEWZ type)

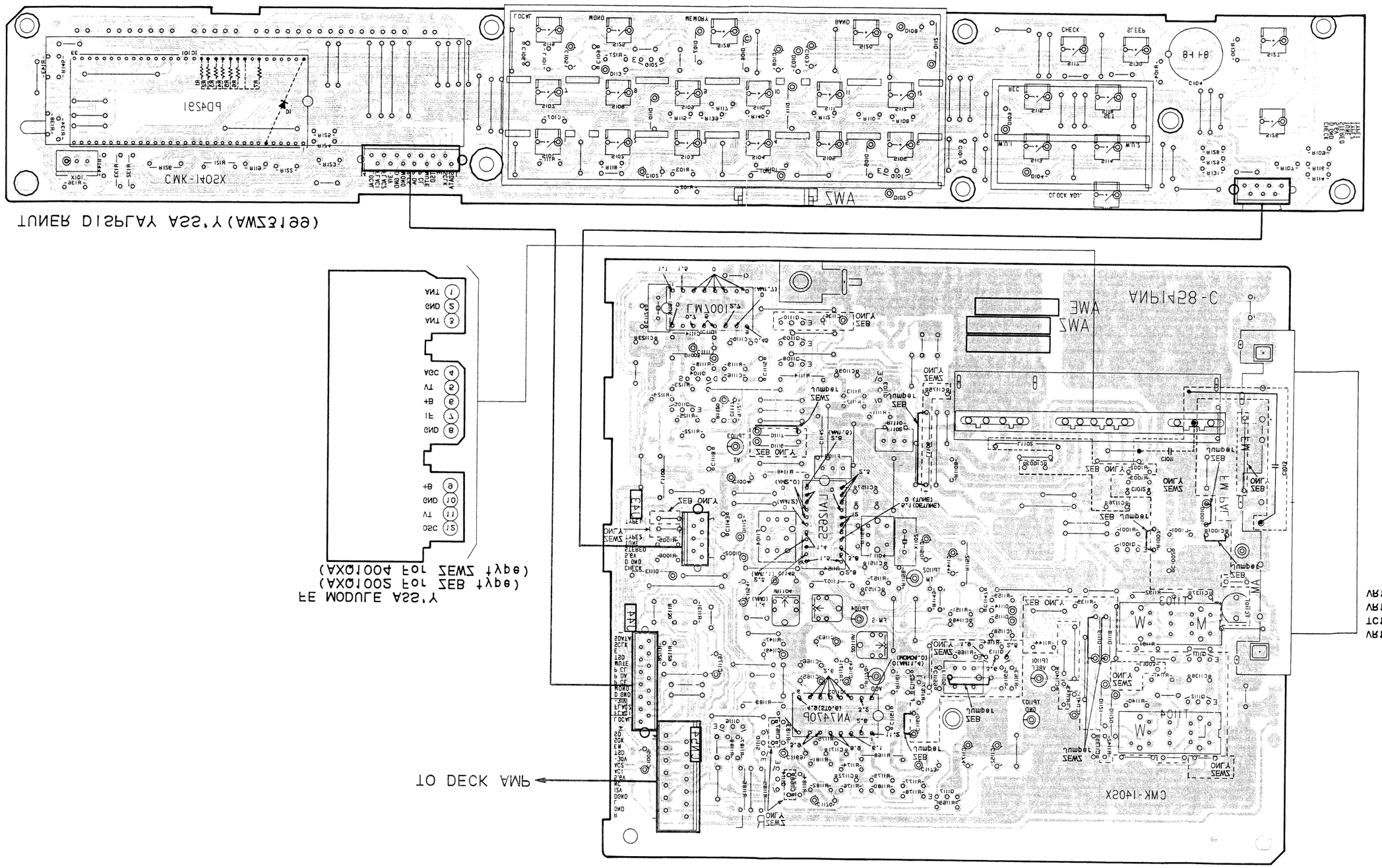


TUNER DISPLAY ASS'Y (AWZ3199)



Q1117
Q1114
Q1115
Q1116
IC1103
Q1112
Q1113
Q1111
VR1102
TC1101
VR1103
VR1104
Q1001
IC1102
Q1105
Q1103
Q1104
Q1108
Q1109
Q1110
IC1101
Q101
IC101
Q102

This P.C.B. connection diagram is viewed from the foil side.



5. P.C.B'S PARTS LIST

NOTES :

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*
- *When ordering resistors, first convert resistance values into code form as shown in the following examples.*

Ex.1 *When there are 2 effective digits (any digit apart from 0), such as 560 ohm and 47k ohm (tolerance is shown by J = 5%, and K = 10%).*

560Ω	*56 × 10¹*	*561*	..... *RD1/4PS 5 6 1 J*
47kΩ	*47 × 10³*	*473*	..... *RD1/4PS 4 7 3 J*
0.5Ω	*0R5*		..... *RD2H 0 R 5 K*
1Ω	*010*		..... *RD1P 0 1 0 K*

Ex.2 *When there are 3 effective digits (such as in high precision metal film resistors).*

5.62kΩ *562 × 10¹* *5621* ..... *RD1/4SR 5 6 2 1 F*

Mark	Symbol & Description	Part No.
◉TUNER MAIN ASS'Y (AWZ3196)		
SEMICONDUCTORS		
	IC1101 PLL IC	LM7001
	IC1102 AM/FM/IC	LA1265S
	IC1103 MPX IC	AN7470P
	Q1001 TRANSISTOR	RN1203
	Q1103 TRANSISTOR	2SC2668
	Q1104 N-FET	2SK246
	Q1105 TRANSISTOR	2SC1740SLN
	Q1108-Q1110 TRANSISTOR	RN2201
	Q1111,Q1112 TRANSISTOR	RN1203
	Q1114,Q1115 TRANSISTOR	2SC2458
	Q1116 TRANSISTOR	2SA1048
	Q1117 TRANSISTOR	2SC2458
	D1002 ZENER DIODE	RD7.5ESB
	D1003,D1112-D1117 DIODE	HSS104-02
	D1118 DIODE	1SS85
	D1119 DIODE	HSS104-02
	D1120 DIODE	1SS85
	D1121 DIODE	HSS104-02
COILS AND FILTERS		
	L1002 AXIAL INDUCTOR	LAU010M
	L1104 COIL	ATE-079
	L1105,L1107 AXIAL INDUCTOR	LAU2R2M
	F1102,F1103 FM CERAMIC FILTER	ATF-107
	F1104 AM CERAMIC FILTER	ATF-208
CAPACITORS		
	C1003 CERAMIC CAPACITOR	CKDYF223Z50
	C1004,C1005 ELECTR. CAPACITOR	CEAS0R1M50
	C1109 CERAMIC CAPACITOR	CKDYF223Z50
	C1110 CAPACITOR(0.01μF)	ACG1021
	C1111 ELECTR. CAPACITOR	CEAS470M10
	C1114 CAPACITOR(0.022μF)	ACG1022
	C1115 AUDIO FILM CAPACITOR	CFTXA224J50
	C1116 CAPACITOR(0.01μF)	ACG1021
	C1117 ELECTR. CAPACITOR	CEAS330M16
	C1118 AUDIO FILM CAPACITOR	CFTXA224J50
	C1123,C1124 CERAMIC CAPACITOR	CCMCH150J50
	C1136 ELECTR. CAPACITOR	CEAS330M16
	C1137-C1139 CERAMIC CAPACITOR	CKDYF223Z50
	C1140 CAPACITOR(0.022μF)	ACG1022
	C1141 ELECTR. CAPACITOR	CEAS470M10
	C1142 CAPACITOR(47p/50)	ACG1016
	C1143 CERAMIC CAPACITOR	CKDYF223Z50
	C1144 ELECTR. CAPACITOR	CEAS4R7M50
	C1145 ELECTR. CAPACITOR	CEAS470M10
	C1147 CERAMIC CAPACITOR	CKCYF473Z50
	C1148 CERAMIC CAPACITOR	CKCYB222K50
	C1149 ELECTR. CAPACITOR	CEAS2R2M50
	C1150 ELECTR. CAPACITOR	CEAS010M50
	C1151 CERAMIC CAPACITOR	CCDSL271J50
	C1152 ELECTR. CAPACITOR	CEAS0R1M50
	C1153 CERAMIC CAPACITOR	CKDYF223Z50
	C1154 ELECTR. CAPACITOR	CEAS330M16
	C1156,C1157 CERAMIC CAPACITOR	CKDYF223Z50
	C1158 ELECTR. CAPACITOR	CEANP2R2M50
	C1161 CERAMIC CAPACITOR	CKCYF473Z50
	C1162 CAPACITOR(470p/50)	ACE1039
	C1163 ELECTR. CAPACITOR	CEAS3R3M50
	C1164 ELECTR. CAPACITOR	CEAS1R5M50
	C1165 ELECTR. CAPACITOR	CEASR22M50
	C1166 CAPACITOR(0.022μF)	ACG1022
	C1169,C1170 ELECTR. CAPACITOR	CEAS010M50
	C1171,C1172 CERAMIC CAPACITOR	CKCYB122K50
	C1173 ELECTR. CAPACITOR	CEAS470M10
	C1174 ELECTR. CAPACITOR	CEAS100M25
	C1176 CERAMIC CAPACITOR	CKDYF103Z50
	C1179 ELECTR. CAPACITOR	CEAS101M50
RESISTORS		
	VR1102 VR(4.7KΩ)	ACP1042
	VR1103 VR(10KΩ)	VRTB6VS103
	VR1104 VR(22KΩ)	ACP1043
	OTHER RESISTORS	RD1/8PM□□□J

Mark	Symbol & Description	Part No.
OTHERS		
	CN54 14P JUMPER CONNECTOR	KPE14
	X1101 RESONATOR(7.20MHz)	ASS1042
	X1102 CERAMIC RESONATOR	ATF1027
	ANTENNA TERMINAL 4-P	AKA1010
	AM RF TUNING BLOCK (T1103)	AXX1012
	AM RF TUNING BLOCK (T1104)	AXX1013
	2SERIAL FE MODULE ASS'Y	AXQ1002

◉TUNER DISPLAY ASS'Y (AWZ3199)

SEMICONDUCTORS		
IC101	CONTROL IC	PD4328A
Q101	TRANSISTOR	2SC2458
Q102	TRANSISTOR	RN1203
D1	DIODE	1SS152
D101-D104	DIODE	HSS104-02
D105	ZENER DIODE	RD9.1ESB
D106-D113	DIODE	HSS104-02
SWITCHES		
S101-S120, S125-S128,S130	SWITCH	ASG1034
COIL		
L101	AXIAL INDUCTOR	LAU220K
CAPACITORS		
C101	AUDIO FILM CAPACITOR	CFTXA224J50
C102	ELECTR. CAPACITOR	CEJA100M35
C103	ELECTR. CAPACITOR	CEJA470M16
C104	CAPACITOR(47/10)	ACH1037
C105	ELECTR. CAPACITOR	CEJA470M16
C106	CERAMIC CAPACITOR	CKDYX473M25
C107	CAPACITOR(1000p/50)	ACG1020
C108	ELECTR. CAPACITOR	CEJA4R7M35
C109	CERAMIC CAPACITOR	CKDYX473M25
RESISTORS		
	ALL RESISTORS	RD1/8PM□□□J
OTHERS		
V101	FL TUBE	AAV1070
X101	RESONATOR(4.19MHz)	ASS1018

6. ADJUSTMENTS

- As to connections and points to be adjusted, refer to Fig. 6-1 and Fig. 6-2.
- Where and asterisk(*) is given for "level dBμ," set to the level (dBμ) at which the voltage is roughly half the voltage between TP1104 and GND at 60dB.

6.1 AM TUNER ADJUSTMENT

- Set the BAND selector to "AM".

Step No.	Adjustment Title	AM SG(400Hz, 30% modulation)		Reception Frequency Display	Adjustment	
		Frequency(kHz)	Level(dBμ)		Adjustment Location	Specifications
1	Tracking adjustment (ZEWZ type only)	603	*	603kHz	MW block ANT coil (T1103)	Adjust so that the DC voltage between TP1104 and GND is maximum.
2		1395		1395kHz	TC1101	
3		Repeat 1 and 2 above				
4	TUNED indicator sensitivity adjustment	999	55±5	999kHz	VR1104	Adjust so that the indicator lights up.

6.2 FM TUNER ADJUSTMENT

- Set the BAND selector to "FM".
- Perform VCO adjustment two minutes or more after turning the power ON.

Note : Stereo modulation : Main 1kHz L + R±68.25Hz dev.
Pilot 19kHz±6.75kHz dev.

Step No.	Adjustment Title	FM SG(1kHz±75kHz dev.)		Reception Frequency Display	Adjustment	
		Frequency(MHz)	Level(dBμ)		Adjustment Location	Specifications
1	Detector coil T-meter adjustment	98.0 (No modulation)	80	98.0MHz	L1104	Adjust so that the DC voltage between TP1101 and TP1102 is± 50mV.
2	VCO adjustment	98.0 (No modulation)	80	98.0MHz	VR1102	Adjust so that the frequency between TP1105 and GND is 76± 0.5kHz
3	TUNED indicator sensitivity adjustment	98.0 (No modulation)	22	98.0MHz	VR1103	Adjust so that the indicator lights up.

6. RÉGLAGE

- Les raccordements et les points de réglages sont représentés à la Fig. 6-1 et Fig. 6-2.
- Lorsqu'un astérisque accompagne un "niveau dBμ", régler à un niveau (dBμ) tel que la tension soit à peu près la moitié de celle qui est présente entre TP1104 et GND pour 60 dB.

6.1 RÉGLAGE DU SYNTONISEUR AM

- Placer le sélecteur BAND sur la position "AM".

Etape No.	Items de réglage	AM SG (400Hz, 30% modulation)		Affichage de fréquence de reception	Réglage	
		Fréquence (kHz)	Niveau (dBμ)		Lieu de réglage	Caractéristiques
1	Réglage de l'alignement (Seuls les type ZEWZ)	603	*	603kHz	Bobine-antenne bloc PO (T1103)	Régler de manière que la tension continue entre TP1104 et GND soit maximale.
2		1395		1395kHz	TC1101	
3		Répète 1 et 2 ci-dessus.				
4	Indicateurs de TUNED Niveau d'éclairement	999	55±5	999kHz	VR1104	Le régler de manière que les indicateurs de TUNED commencent à s'allumer.

6.2 RÉGLAGE DU SYNTONISEUR FM

- Placer le sélecteur BAND sur la position "FM".
- Régler le VCO après deux minutes (ou plus) de mise sous tension.

Note: Modulation stéréo: Principal 1kHz L + R ±68,25Hz dév.
Pilote 19kHz ±6,75kHz dév.

Etape N°	Items de réglage	FM SG (1kHz ± 75kHz dév.)		Affichage de fréquence de réception	Réglage	
		Fréquence (MHz)	Niveau (dBμ)		Lieu de réglage	Caractéristiques
1	Réglage de la bobine de détection	98,0 (sans modulation)	80	98,0MHz	L1104	Régler de manière que la tension continue entre TP1101 et TP1102 soit égale à ±50mV.
2	Réglage du VCO	98,0 (sans modulation)	80	98,0MHz	VR1102	Régler de manière que la fréquence entre TP1105 et GND soit égale à 76 ± 0.5 kHz.
3	Indicateurs de TUNED Niveau d'éclairement	98,0 (Non mudulation)	22	98,0MHz	VR1103	Le régler de manière que les indicateurs de TUNED commencent à s'allumer.

6. AJUSTE

- Para las conexiones y puntos de ajuste, refiérase a la Fig. 6-1 y Fig. 6-2.
- Donde un asterisco (*) represente el "nivel dBμ", ajuste al nivel (dBμ) en el que la tensión sea aproximadamente la mitad de la tensión entre TP1104 y GND a 60 dB.

6.1 AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE AM

- Ajuste el selector BAND a la posición "AM".

N°. de paso	Items de ajuste	AM SG (400Hz, 30% modulation)		Frecuencímetro de recepción	Ajuste	
		Frequencia (kHz)	Nivel (dBμ)		Lugar de ajuste	Especificaciones
1	Ajuste de alineación (Sólo los tipo ZEWZ)	603	*	603kHz	Bobina de antena colectiva de MW (T1103)	Ajuste de manera que la tensión de CC entre TP1104 y GND sea la máxima.
2		1395		1395kHz	TC1101	
3		Repita los pasos 1 y 2 arriba descritos				
4	Nivel de iluminación de TUNED.	999	55±5	999kHz	VR1104	Ajústelo de forma que los indicadores de TUNED comiencen a encenderase.

6.2 AJUSTE DE LA SECCIÓN DEL SINTONIZADOR DE FM

- Ajuste el selector BAND a la posición "FM".
- Realice el ajuste VCO dos minutos o más después de conectar la alimentación.

Nota: Modulación estereo: Principal 1kHz L + R ±68.25Hz dev.
Pilote 19kHz ±6.75kHz dev.

N°. de paso	Items de ajuste	FM SG (1kHz ± 75kHz dev.)		Frecuencímetro de de recepción	Ajuste	
		Frequencia (MHz)	Nivel (dBμ)		Lugar de ajuste	Especificaciones
1	Ajuste del medidor T de la bobina detectora	98,0 (Sin modulación)	80	98.0MHz	L1104	Ajuste de manera que la tensión de CC entre TP1101 y TP1102 sea de ±50mV.
2	Ajuste VCO	98,0 (Sin modulación)	80	98.0MHz	VR1102	Ajuste de manera que la frequencia entre TP1105 y GND sea de 76 ± 0.5kHz.
3	Nivel de iluminación de TUNED.	98.0 (Non mudulation)	22	98.0MHz	VR1103	Ajústelo de forma que los indicadores de TUNED comiencen a encenderase.

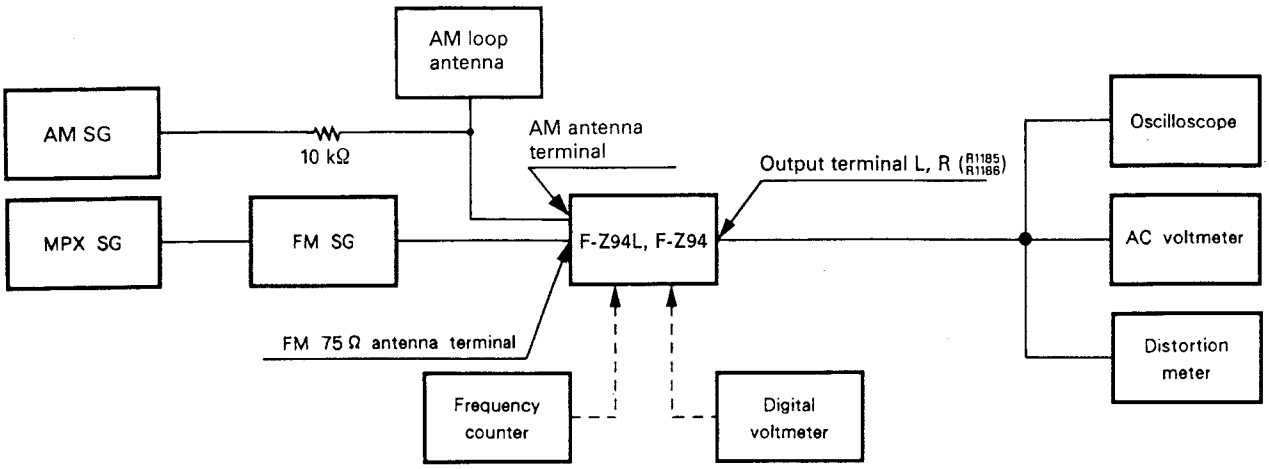


Fig. 6-1 AM and FM adjustment wiring diagram

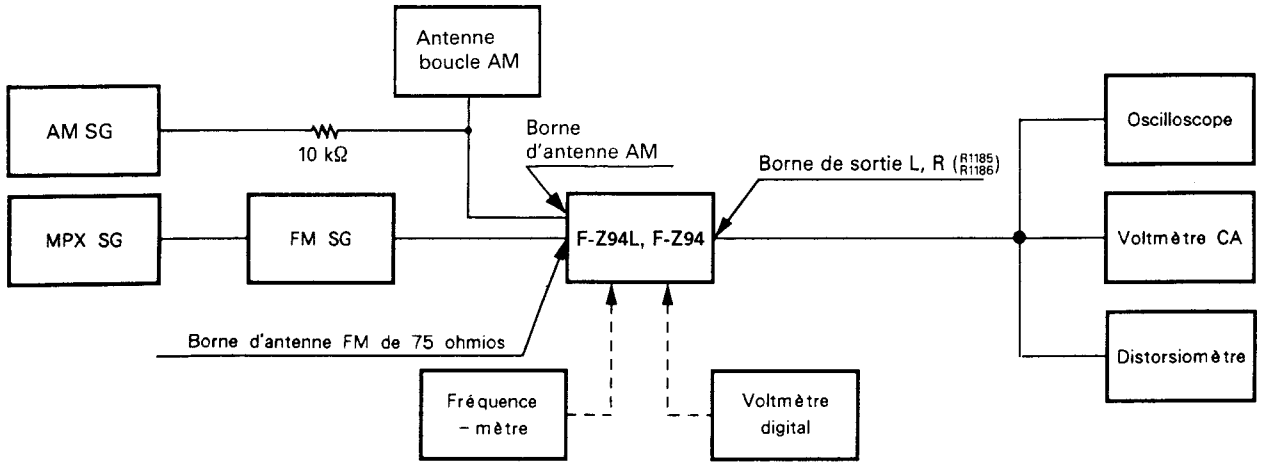


Fig. 6-1 Diagramme de càblage de réglage AM et FM

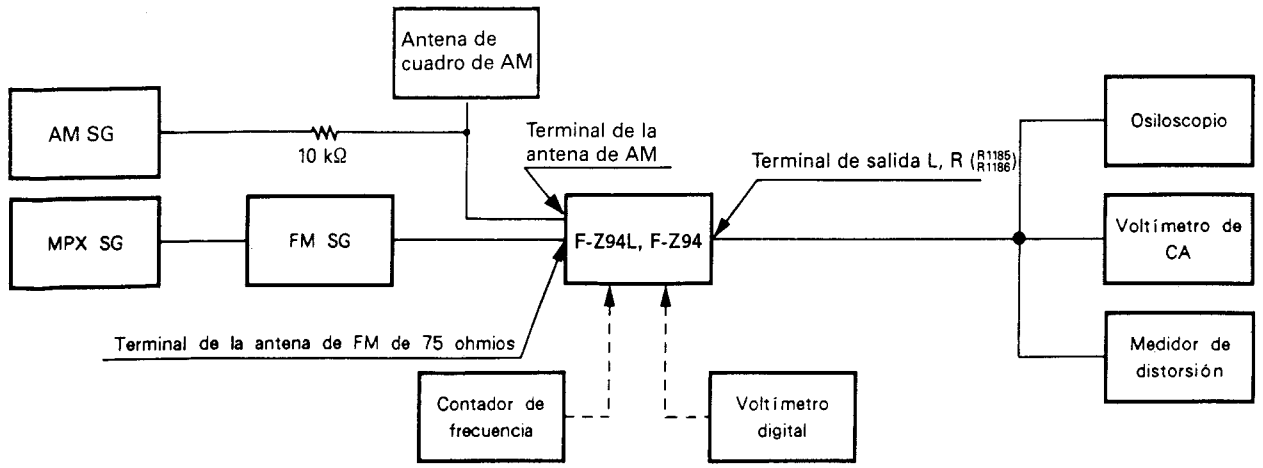


Fig. 6-1 Diagramma de conexión de ajuste de AM y FM

*1 : Only ZEWZ type
Seuls les type ZEWZ
Sólo los tipo ZEWZ

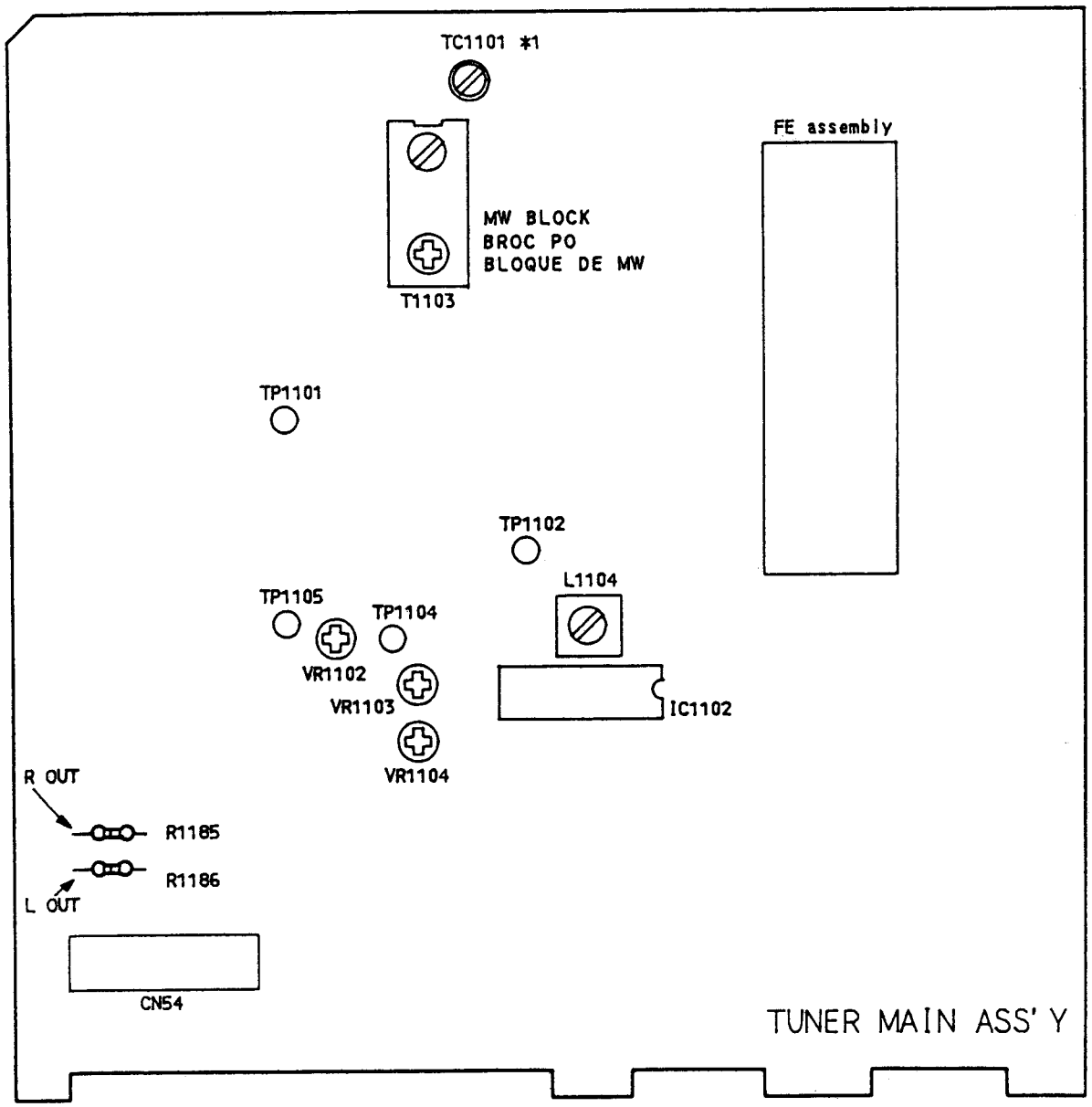


Fig. 6-2 Adjustment points
Fig. 6-2 Points de réglage
Fig. 6-2 Puntos de ajuste

7. FOR F-Z94/ZEWZ TYPE

NOTES:

- *Parts without part number cannot be supplied.*
- *Parts marked by "◉" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.*
- *The ⚠ mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.*

F-Z94/ZEWZ type is the same as the F-Z94L/ZEB type with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		F-Z94L/ZEB type	F-Z94/ZEWZ type	
	FM antenna	ADH1008	.....	
	FM antenna assembly	.....	ADH1002	
	Packing case	AHD1995	AHD1994	For packing
	Front panel	AMB1739	AMB1738	
◉	Main assembly	AWZ3196	AWZ3197	

Main Assembly (AWZ3197)

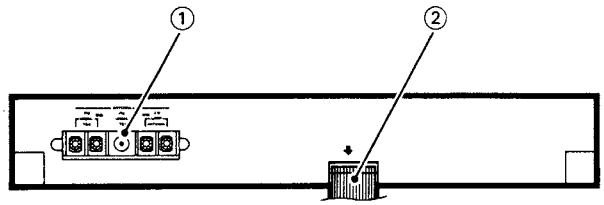
The Main assembly(AWZ3197)is the same as the Main assembly(AWZ3196)with the exception of the following sections.

Mark	Symbol & Description	Part No.		Remarks
		AWZ3196	AWZ3197	
	Q1110	RN2201	.....	
	Q1111,Q1112	RN1203	.....	
	Q1113	.....	2SC2458	
	D1001	.....	1SV156	
	D1116,D1117,D1119,D1121	HSS104-02	.....	
	D1118,D1120	1SS85	.....	
	L1001,L1106	.....	LAU2R2M	
	L1102	LAU010M	.....	
	L1003	.....	LAU470K	
	F1102	ATF-107	ATF-119	
	F1104	ATF-208	ATF1042	
	F1105	.....	ATF1088	
	TC1101	.....	ACM-018	
	C1001	.....	CKDYF102Z50	
	C1002	.....	CKDYF103Z50	
	C1003	CKDYF223Z50	.....	
	C1011,C1013	.....	CKDYB102K50	
	C1012	.....	CCDSL680J50	
	C1136	CEAS330M16	.....	
	C1137	CKDYF223Z50	CKDYX473M25	
	C1138	CKDYF223Z50	.....	
	C1159	.....	CKDYB122K50	
	C1160	.....	CEAS2R2M50	
	C1167,C1168	.....	CKDYB392K50	

Mark	Symbol & Description	Part No.		Remarks
		AWZ3196	AWZ3197	
	C1171,C1172	CKCYB122K50	CKCYB102K50	
	C1175	.....	CKDYF103Z50	
	C1176	CKDYF103Z50	.....	
	R1001	RD1/8PM472J	RD1/8PM152J	
	R1002	RD1/8PM103J	.....	
	R1003	.....	RD1/8PM153J	
	R1007	.....	RD1/8PM560J	
	R1139,R1142,R1143	RD1/8PM681J	.....	
	R1140	RD1/8PM104J	.....	
	R1141	RD1/8PM102J	.....	
	R1144	RD1/8PM392J	.....	
	R1163	.....	RD1/8PM224J	
	R1164	.....	RD1/8PM473J	
	R1165	.....	RD1/8PM222J	
	R1166	.....	RD1/8PM122J	
	R1167	.....	RD1/8PM472J	
	R1174	RD1/8PM913J	RD1/8PM473J	
	R1183,R1184	RD1/8PM302J	RD1/8PM472J	
	R1192	RD1/8PM103J	RD1/8PM472J	
	Antenna terminal(PAL 4P)	AKA1010	.....	
	Antenna terminal(2P)	.....	AKA1012	
	FE module assembly(2L)	AXQ1002	.....	
	FE module assembly(4L)	.....	AXQ1004	
	AM RF tuning block(MW)	AXX1012	AXX1014	
	AM RF tuning block(LW)	AXX1013	.....	

8. PANEL FACILITIES

REAR PANEL FACILITIES



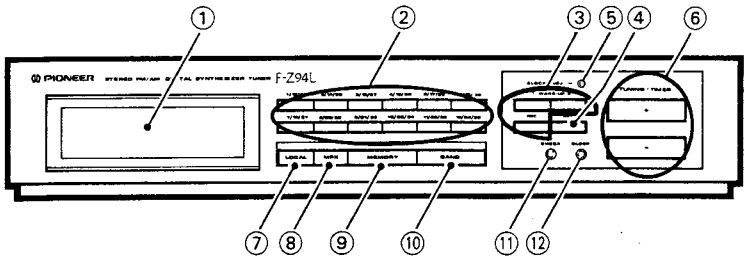
① FM/AM ANTENNA terminals

Antennas must be connected to these terminals: otherwise you will not be able to receive stations. See page 4 for details on ANTENNA CONNECTIONS.

② TUNER input/output cord

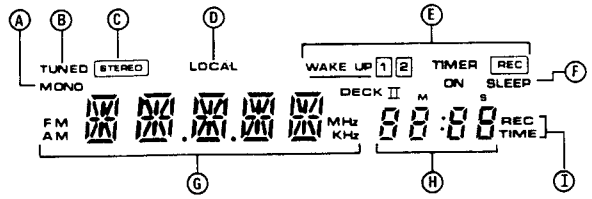
Connect to the TUNER jack of the cassette deck amplifier.

FRONT PANEL FACILITIES



① Display section

Shows current time, received frequency, contents of timer settings, etc.



Ⓐ MONO indicator
Lights when the MPX button is set to ON. When this indicator is lit, FM stereo broadcasts are reproduced monaurally.

Ⓑ TUNED indicator
Lights when a broadcast is received and tuned in well.

Ⓒ STEREO indicator
Lights when an FM stereo broadcast is received (MPX button set to OFF).

Ⓓ LOCAL indicator
Lights when the LOCAL button is set to ON.

Ⓔ Timer indicators
These show various timer setting.

Ⓕ SLEEP indicator
Indicates that the sleep timer is activated.

Ⓖ Frequency display
Shows received broadcast frequency. Also gives scrolling display of main function status.
FM and MHz light: FM reception.
AM and kHz light: MW or LW reception.

Ⓗ Time display
This shows the present time and during recording, it shows the elapsed recording time. When you listen to a broadcast, the STATION CALL number is displayed.

Ⓘ Deck REC TIME indicator
Lights when deck is recording.

② STATION CALL buttons

Used for memorizing and recalling memorized stations.

③ Timer selector buttons

[WAKE-UP 1,2]
Used for timer playback setting.
[REC]
Used for timer recording setting.

④ SET button

Used for current time, timer playback, and timer recording setting.

⑤ CLOCK ADJ button

Used for starting the clock adjustment.

⑥ TUNING/TIMER (–, +) buttons

[During tuning]
Used for locating stations.
Use "–" button for lower, and "+" button for higher frequencies.
[During time and timer setting]
Used for adjusting the clock, timer settings and its related adjustments.

⑦ LOCAL button

Use this if the broadcast signal is too strong, causing noise and distortion. The atttenuator reduces the strength of the signal, reducing noise and distortion.

⑧ MPX (FM MONO) button

Turn on when there is much noise during reception of FM stereo broadcasts. The reproduced sound will become monaural but noise will be reduced.

⑨ MEMORY button

Used for memorizing stations. When the button is pressed, the frequency display will flash. To memorize the frequency of any station, press a station call button while the frequency display flashes.

⑩ BAND selector button

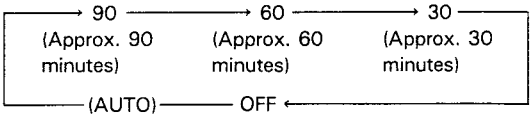
Each time this button is pressed, FM, MW or LW reception is selected in order.

⑪ CHECK button

Used for confirming timer settings, after setting for timer playback or timer recording.

⑫ SLEEP button

Sets the sleep timer.
Each time you press this button, the setting changes as shown here.
The current setting is shown on the tuner display.
Power turns off when your set time has elapsed.



If you press the SLEEP button during recording, AUTO is displayed, and power is switched off at the end of recording.